

**University of New Mexico and Los Alamos National Laboratory  
Memorandum of Understanding on Research and Education**

This Memorandum of Understanding (MOU) is entered into between the University of New Mexico (UNM) and the Regents of the University of California (UC), operator of the Los Alamos National Laboratory (Laboratory) under Contract NO. W-7405-ENG-36, both referred to below as Parties.

Whereas the Parties share the goals of strengthening their interactions by providing opportunities for research, education, recruiting, and retention, UC and UNM hereby enter into this MOU on Research and Education to accomplish this goal.

**Program Goals and Benefits**

UNM wishes to provide research opportunities for graduate and undergraduate students, postdoctoral researchers, and faculty to participate in new and innovative research in collaboration with the Laboratory. UC wishes to enhance its research collaborations with UNM in areas of strategic importance to the Laboratory and to provide a research environment that will encourage students to pursue various careers, possibly at the Laboratory. The present bilateral MOU is intended to allow both institutions to take full benefit of their overlapping and complementary strengths to build on present areas of excellence.

This MOU provides excellent opportunities for faculty and students at UNM and the Laboratory to develop formal collaborations in areas of mutually beneficial research and education. Academic interactions will help the Laboratory attract top-notch students and retain world-class scientists; that is, the program will provide an opportunity for students to understand and participate in the Laboratory's research programs. UNM will benefit through use of Laboratory facilities, resources, and intellectual capabilities. The Laboratory will benefit through the introductions of students and faculty from UNM to the varied programs at the Laboratory and from the opportunity to interest students in potential careers at the Laboratory. Further, Laboratory staff will have an opportunity to participate in UNM academic and research programs enriching their work within the Laboratory. A successful collaborative program will enhance synergy and cross-fertilization of ideas, provide solutions to scientific challenges, and develop new technologies and research areas

**A. Strategic Framework**

Under this MOU UNM and the Laboratory will establish the UNM/LANL Joint Science and Technology Laboratory, under which strategic partnerships will be established and directed. The following structure is established to develop and implement the UNM/LANL Joint Technology Laboratory.

1. This MOU with UNM includes the College of Arts and Sciences, the School of Engineering, the School of Medicine, and the Office of the Vice Provost for Research (to encompass the Center for High Technology Materials, Center for High Performance Computing, and the Center for Micro-Engineered Materials). The MOU establishes a few strategic research areas. The MOU recognizes a variety of possible collaborative models that an executive committee may develop. These collaborative programs should include staff-faculty joint research or exchanges, undergraduate and graduate programs, postdoctoral programs, and other mechanisms that would encourage staff-faculty-student interactions, e.g., workshops and seminars.

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2. Under this MOU an Executive Committee is established that will oversee the UNM/LANL Joint Science and Technology Laboratory. The members of the Executive Committee will be the Deputy Director for Science and Technology for LANL and the Vice Provost for Research at UNM and one alternate from each institution, who will attend meetings, but not vote unless the corresponding principal is absent. The Executive Committee will charter and establish the Management Committee for the UNM/LANL Joint Science and Technology Laboratory, with membership likely drawn from the Division Leader level for LANL and the Dean and Department chair level for UNM. Among its responsibilities this management committee would recommend strategic directions, suggest resource allocations, and resolve issues.

## **B. Program Components**

The parties anticipate that three kinds of programs will be initially supported through this MOU, as implemented by specific approved proposals: (1) student and postdoctoral scholar programs; (2) university faculty and laboratory staff programs; and (3) collaborative research programs. This MOU defines the scope and responsibilities for the successful implementation of these cooperative programs. It is expected that these programs will be implemented when appropriate, either under existing Laboratory programs for these activities, or via the development of new programs agreed to by the parties, and approved by the DOE as appropriate.

### **(1) Student Programs**

Emphasis in the student programs is on ensuring that students are placed in rewarding education and research assignments that complement both the UNM program and Laboratory needs. In general, students are expected to complete their course work at UNM and perform research at the Laboratory at an appropriate time to be determined by the student's UNM faculty advisor in concert with the Laboratory mentor. Subject to availability of funds and approval by the Executive Committee, funding opportunities may be provided for undergraduate and graduate students, and postdoctoral researchers. Faculty participation and advising is expected for both the on-campus and off-campus components of the program. The selection of student participants, mentors, and research projects under this MOU will be made through a process developed by the Executive Committee.

A faculty advisor will be assigned to each student. The advisor in concert with the Laboratory mentor will be responsible for guiding the student's research. Faculty advisors and Laboratory mentors will monitor progress to assure that the students have a positive experience in this program. For research expected to in academic credit, final credit decisions and academic evaluations will be made by UNM, with appropriate input from UC and/or Laboratory personnel. UNM will have full access to all of the students' work for review and evaluation and pedagogical purposes, except as specifically provided to the contrary in any implementing agreement executed by the parties.

Students may receive academic credit, compensation from either UNM or UC, or both, as determined by the Executive Committee for the particular program or situation.

**Undergraduate Programs.** The cooperative program is expected to offer several opportunities for undergraduate students to participate. Although the research and continuing education at the Laboratory will normally occur during the UNM summer session, it is possible that applicants with the advice and consent of their faculty and Laboratory mentors, might participate at other appropriate times.

*The Undergraduate Student Program.* The goal is to combine on-campus academic programs with off-campus work experiences in technical divisions at the Laboratory. Specific job

descriptions, qualifications, and selection criteria and appropriate funding arrangements will be developed by the Management Committee. In general, sophomores and juniors in good academic standing in their majors who have research interests compatible with those of the Laboratory staff will be eligible to apply for the program.

**Graduate Programs.** It is anticipated that graduate students will be offered several opportunities for participation. Subject to UNM policies, practices, and procedures, thesis work will be supervised by the graduate advisory committee of the student and performed both at the Laboratory and at UNM. Work performed at the Laboratory is subject to Laboratory policies and procedures for graduate students and thesis activities. Subject to availability of funds, the recommendation of the Management Committee and approval by the Executive Committee, full fellowships for doctoral dissertations may also be supported. The parties anticipate that funding support will typically include some combination of fellowship, graduate student research grant, and tuition and fee remission. Selection of graduate students and funding support will be determined through a process developed by the Executive Committee.

*Graduate Research Program.* The program may have multiple tiers to match the student education cycle. For beginning graduate students, summer learning and research opportunities at the Laboratory are appropriate. As students progress in their education and define their research fields and interests, the Laboratory, subject to availability of funds, may move toward multiple-year funding commitments, for a period of one to four years. For long-term funding commitments, students may spend substantial fractions of their time at the Laboratory.

*Graduate Scholarship Program.* Subject to availability of funds, an annual graduate scholarship program will support PhD candidates in one of the collaborative research areas defined by this MOU.

**Postdoctoral Programs.** Based on the availability of funding, opportunities for postdoctoral researchers to participate through this MOU may include (1) short-term visits to the Laboratory to learn valuable skills and to conduct research or (2) extended stays to participate in collaborative research projects jointly supervised by UNM and the Laboratory. Selection of postdoctoral scholars will be determined through a process developed by the Executive Committee.

## **(2) Faculty and Staff Programs**

The faculty and staff program is expected to enhance interactions between UNM faculty and the Laboratory staff, increase the participation in seminars sponsored by the two organizations, and increase their opportunities for collaborative research projects. Short-term exchanges of faculty and staff that will include seminar presentations and provide opportunities for interactions among faculty, staff, and students to discuss research projects will be encouraged and supported, when possible. It is not contemplated that the exchanges will result in co-employment of the same individual by both parties. The exchanges will also provide opportunities for faculty and students to discuss possible collaborative research projects.

The mentors and faculty advisors for students who participate in the graduate programs described above will be expected to participate in the collaborative programs. The faculty will be expected to have frequent and extended presence at the Laboratory in appropriate office space, subject to Laboratory safety and security policies and regulations. This is essential for the communication between the two institutions and for the educational benefits of the students. Likewise, Laboratory

scientists will have frequent and extended presence on the UNM campus, as an essential part of fostering scientific collaborations and attracting students to the Laboratory. Support relating to this exchange of personnel is expected to be provided according to this MOU.

Subject to the availability of funds, support will be provided to faculty or staff for “sabbatical” exchanges and to visiting researchers for one or more academic semesters. A visiting scholar’s program is expected to incorporate two-way exchanges, funding UNM faculty to do research at the Laboratory and Laboratory staff to teach and conduct research at UNM, subject to the employment obligation of Laboratory Staff at the Laboratory. An important component is adjunct professorships, subject to the same requirements and standards as those for UNM faculty appointments and other applicable UNM policies, practices, and procedures, but subject to UC’s obligations under its prime contract with the Department of Energy. The institutions will nominate their respective faculty or staff through a process developed by the Executive Committee for consideration for these opportunities. Adjunct professorships will be appointed, as usual, by academic departments at UNM.

**Courses, Seminars, Workshops, and Colloquia.** Subject to the availability of funding, special-topic courses, workshops, and targeted seminar series may be established. These faculty and staff exchange programs will enhance interactions between the UNM faculty and the Laboratory staff, increase the participation of each in the other’s seminars, develop a better understanding of issues relevant to both institutions, and increase opportunities for collaborative research projects.

### **(3) Collaborative Research Programs**

Subject to the availability of funds, the Executive Committee, through this MOU, will establish a seed or pilot project fund to support collaborative research projects designed to attract large extramural research grants. This program is expected to provide seed funding for projects that clearly merge and expand research between the two institutions and that are related to topics of mutual interest. The projects will be awarded to scientists at the Laboratory and UNM through a selection process established by the Executive Committee. The Executive Committee will review and decide on annual funding commitments for these pilot projects on the basis of potential for producing valuable scientific and technological innovations of mutual interest to both institutions.

### **Research Areas**

UC and UNM have initially identified four related research themes of strategic importance to both institutions that will be supported under this MOU as available funds permit: bioscience, materials, quantum information science, and computer science. UNM schools and academic divisions will play significant roles in developing interdisciplinary research endeavors with the Laboratory. The Executive Committee [see below] will conduct periodic program reviews to suggest new strategic areas for collaboration to the signatories. All work performed under this MOU will be unclassified and will not interfere with any Department of Energy directed and funded work of the Laboratory.

## **C. Governance**

### **Program Administration**

UC and UNM will select a Management Committee composed of equal voting membership from UNM and UC, to be named by the parties’ respective Executive Committee members. The Chair of the Management Committee will alternate annually between UNM and UC and will be chosen by the Committee members from among their voting members. The Vice Chair will be chosen similarly, will also alternate annually between UC and UNM, and normally will become the Chair the following

year. The Management Committee will be responsible for implementing the processes and procedures developed by the Executive Committee for the student, faculty, and staff programs within the terms of this MOU (see "Funding" below), and decisions shall be made by a majority of those members voting. Either party may change its representatives to the Management Committee at any time upon notice to the other party.

The Executive Committee for this MOU will serve as *ex officio* members of the Management Committee. The Executive Committee's responsibilities will include budget authority for their respective institutions, and adherence to Laboratory, UNM, and government policies, rules, and regulations. For example, the institutions will follow the appropriate policies to protect intellectual, scientific, or academic freedom. The Executive Committee will report annually to the UNM President and to the Laboratory Director on the progress of the cooperative programs. In addition, the Executive Committee will conduct periodic reviews of the areas of research emphasis covered by this MOU and may propose new areas.

The Executive Committee will develop and implement a process for soliciting and evaluating project proposals to be funded with UCDRD funds. For those projects selected through the process, the research as described in the proposal will suffice as the task statement and will be funded at levels recommended by the Management Committee and approved by the Executive Committee.

**Los Alamos National Laboratory.** The Laboratory DDST will oversee and coordinate implementation of this MOU on behalf of the Laboratory Director. Laboratory divisions or staff will be involved with the implementation of the MOU. Technical divisions will be responsible for research assignments, training, and the supervision of the students. Each student will be assigned a Laboratory mentor, who will work cooperatively with the UNM faculty advisor and who will be responsible for the content and review of the student's work at the Laboratory. The Laboratory mentor will communicate regularly with the faculty advisor about the student's progress and experience and will host the student's faculty advisor during Laboratory visits.

**University of New Mexico.** The Vice Provost for Research will oversee and coordinate the implementation of this Agreement on behalf of UNM. The UNM VPR will administer the University activities necessary to support the policy, recruiting, and financial issues related to the Agreement's operation at UNM. The UNM Deans, departments and faculty will be involved with the implementation of the Agreement. The UNM departments and faculty will be responsible for research assignments, training, academic evaluation, awarding of academic credit, and the supervision of the students. Each student will be assigned a UNM mentor, who will work cooperatively with the Laboratory mentor and who will be responsible for the content and review of the student's work at UNM. The UNM mentor will communicate regularly with the Laboratory mentor about the student's progress and experience and will host the Laboratory mentor during UNM visits.

**Los Alamos/UNM Program Support.** The Laboratory and UNM are expected to provide program support to recruit, matriculate, and help maintain a viable cooperative program between the two institutions. This will be done cooperatively and complementarily at both institutions through publicity and advertisement.

**Program Initiation.** This MOU is effective on the date on which duly authorized representatives of UC and UNM sign it. UC and UNM will designate members for the Management Committee. The Executive Committee will develop a mutually agreed-upon process for the startup and administration of this MOU: (1) student and postdoc programs, (2) faculty and staff programs, and (3) collaborative research programs.

**Program Evaluation.** The Executive Committee will evaluate the cooperative program on an annual basis using information such as the following:

- Reports and evaluations by students and others on research projects
- Theses and dissertations supported by this MOU
- Reports from UNM faculty and Laboratory staff involved in exchanges, visits, and sabbaticals
- Hires of students participating in the programs
- Reviews of the research as required by the Laboratory or UNM
- Proposals and applications for research grants

**Funding.** Contingent upon the availability of funds and subject to the approval of the respective institutions, UC will provide UCDRD funds or funds from other funding sources yet to be identified, and UNM will provide research and office space at UNM at its discretion for the duration of this MOU. Renewal of this MOU will depend in part on each party's ability to continue its respective support. Expected resource amounts to be contributed by the Laboratory or UNM may be revised from time to time subject to the Agreement of the Laboratory and UNM, the availability of funds, and institutional approval. UCDRD funds will be expended only for allowable costs as provided in OMB Circular A-21 or as specified by policies of the University of California communicated to UNM in advance and agreed to by the parties. The Executive Committee will establish procedures for the submission and approval of budgets, authorization and commitment of funds, terms and conditions of awards, approval of work plans, submissions of requests for payment and payment of funds under this MOU.

**Publication.** UNM will have the right, at its discretion and consistent with its tenet of academic freedom, to release information or to publish any material resulting from its performance hereunder subject to applicable laws and University of New Mexico policies, procedures, and practices. Both parties subscribe to open publication of results derived from exchanges and research performed under this MOU. The Laboratory Classification Office must be notified at least 30 days in advance of publication or other presentation of material, data, record charts, graphs, or other records developed or maintained under this MOU.

**Intellectual Property.** Ownership of any intellectual property created in the performance of work managed under the framework established by this MOU (Intellectual Property) will be determined in accordance with applicable intellectual property law and regulations and University of New Mexico, University of California, and Laboratory procedures and practices consistent with the contract between the University of California and the Department of Energy for managing and operating the Laboratory. Individuals participating in research under this MOU will submit any invention disclosures simultaneously to both institutions. The parties are currently negotiating a UNM-LANL Memorandum of Understanding on Intellectual Property, which will, if and when adopted executed provide process and procedures to guide intellectual property issues.

**Liability.** The Laboratory shall be responsible for all liability, loss, expense (including reasonable attorney's fees), or claims for injury or damages arising out of the performance of this MOU only in proportion to and to the extent such liability, loss, expense, attorney's fees, or claims for injury or damages are caused by or result from the negligent or intentional acts or omissions of the Laboratory, its officers, agents, or employees.

UNM shall be responsible for all liability, loss, expense (including reasonable attorney's fees), or claims for injury or damages arising out of the performance of this MOU only in proportion to and to

the extent such liability, loss, expense, attorney's fees, or claims for injury or damages are caused by or result from the negligent or intentional acts or omissions of UNM, its officers, agents, or employees.

Nothing in this section is intended to create liability or contractual obligations on behalf of either party. Instead, this section merely describes the parties' acknowledgments of their existing responsibility for liability under certain circumstances.

**Changes to the MOU.** This MOU between UC and UNM is intended to enhance scientific and educational programs of mutual interest to the two institutions. The MOU is initiated as a cooperative partnership between UNM and UC but may be modified by them to change the programs or research areas. The MOU may be adjusted in order to accommodate a changing environment, new guidance from UNM or UC, or insight gained from the ongoing interaction. The modification of any terms of this MOU shall be made through a written amendment signed by the authorized representative of each party.

**Nature of this MOU.** This MOU describes a mechanism for coordinating activities and is not intended to create any relationship between the parties other than that of independent entities cooperating to effect the purposes of the MOU. No provision of this MOU is intended to conflict with any law, policy of either party, or provision of the prime contract between the Department of Energy and UC, and the provisions should be construed in a manner that will uphold their validity.

**Costs.** Each Party shall bear its own expenses in connection with the activities conducted under this MOU.

**Export Control.** The Parties understand that information resulting from or exchanged during the course of this MOU may be subject to export control laws and that each Party is responsible for its own compliance with such laws.

**Technical Data and Intellectual Property.** While this MOU sets forth a framework for the Parties to implement research projects, the actual performance of research and development is not self-implementing by this MOU. Performance of research and development will occur under appropriate mechanisms to be developed by the Executive Committee.

Nothing in this MOU shall be construed as a license or assignment of any rights in any intellectual property from either Party to the other Party or to the U.S. Government.

**Disclaimer of Warranties.** Neither Party makes any warranty, express or implied, as to the accuracy or usefulness of any information disclosed to the other Party under this MOU, or that the use of any such information would not infringe intellectual property rights owned by third parties.

**Proprietary or Privileged Information.** If it becomes necessary for either Party to disclose proprietary or other privileged information to the other Party to effectuate the purposes of this MOU, a separate Non Disclosure Agreement (NDA) applicable to such information shall be executed by the Parties.

Communications regarding technical information shall be addressed as follows:

University of California  
Los Alamos National Laboratory  
P. O. Box 1663, MS  
Los Alamos, NM 87545

University of New Mexico  
MSC 05 3400  
Scholes Hall 226  
Albuquerque, NM 87131

Attn: Allen Hartford  
Telephone: (505) 665-8812  
Fax: (505) 665-4092

Attn: Vice Provost for Research  
Telephone: (505)-277-6128  
Fax: (505) 277-5271

Communications regarding administration of this MOU may be addressed as follows:

University of California  
Los Alamos National Laboratory  
P. O. Box 1663, MS C334  
Los Alamos, NM 87545

University of New Mexico  
MSC 05 3400  
Scholes Hall 226  
Albuquerque, NM 87131

Attn: Patricia Grall  
Telephone: (505) 665-3441  
Fax: (505) 665-0154

Attn: Vice Provost for Research  
Telephone: (505) 277-6128  
Fax: (505) 277-5271

**Miscellaneous.** Activities undertaken by UC under this MOU shall be conducted only on a noninterference basis with respect to DOE programs at the Los Alamos National Laboratory and shall be within the general scope of work and in accordance with the terms of the contract with DOE.

Neither Party shall be, nor hold itself out as, a subcontractor, partner, or agent of the other Party. The Parties agree that this MOU does not constitute a joint venture, affiliation agreement or other similar arrangement.

**Term and Termination of the MOU.** This MOU will be effective for a period of five years from the date last signed, but may be extended by mutual consent. UC and UNM will evaluate this MOU annually. Either party may terminate this MOU at any time with 90 days written notice to the other party, provided, however, that funding for faculty activities shall continue until the end of the then-current semester, and that funding for student activities shall continue until the end of the then-current academic year. In the event that funding for the program is not available or that, for whatever reason the MOU is terminated, UC and UNM are expected to use their best efforts to help students and postdoctoral scientists participating in the program to secure funding so that their education and research will not be interrupted; however, neither UNM nor UC is responsible for securing such funding or liable if that funding is not secured. If the MOU is terminated, UNM and UC will meet in good faith to agree upon a reasonable closeout plan for funded activities that is equitable to both parties and within the spirit of this Agreement.

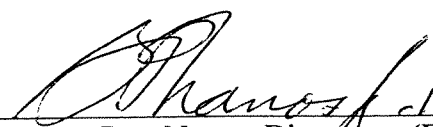
**Dispute Resolution.** Any disputes between the parties arising out of this MOU or out of any implementing agreement shall, except to the extent provided to the contrary in any such implementing agreement, be resolved by the Executive Committee. To the extent the Executive Committee is unable to resolve the dispute, it shall be referred to a decision-making panel consisting of three individuals not then employed by either UC, the Laboratory, or UNM, as follows. One person shall be chosen by the Director of the Laboratory from a list of three names provided by the President of UNM, one person shall be chosen by the President of UNM from a list of three names provided by the Director of the Laboratory, and the third person shall be chosen by those two persons.

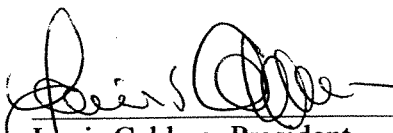
This MOU may be signed in one or more counterparts (including faxed copies), each of which shall be deemed one and the same original.

The parties have caused this MOU to be executed in duplicate originals by their duly authorized representatives.



UNM-LANL Memorandum of Understanding

  
George Pete Nanos, Director (Date)  
Los Alamos National Laboratory

 10/16/03  
Louis Caldera, President (Date)  
University of New Mexico

## **APPENDIX**

The Appendix contains the intellectual property agreement between UNM and the Laboratory for individuals participating in research under this MOU.

last revised 2003-09-07

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